

REMARKS:

Claims 12-22 are in the case and presented for consideration.

The drawings were objected to on the grounds that the examiner believes the same reference numeral "11" is used to designate "communications terminals" in the specification and "common terminal" and "subscriber device" in claim 12. Claim 12 has been amended to more clearly recite the common terminal refers to a point, not a device. That is, the common terminal point recited in the claims as part of the branching means is not terminal equipment, such as a computer; rather the terminal points form different paths for communications or data. The common terminal point and branching terminal point as now recited in claim 12 together define a first path for conventional or mobile communications. The common terminal point and second branching terminal point define a second path for data communications. Thus, the changed terminology clearly distinguishes between the path points and the elements numbered in the drawings.

With respect to the term "subscriber device", applicant respectfully directs the examiner's attention to page 9 of the specification. The paragraphs preceding the Industrial Applicability section use the term and describe the subscriber device sufficiently to one of even ordinary skill in the field.

Therefore, applicant submits that the objection to the drawings is overcome, and so no revised drawings are required.

Claims 12-21 have all been rejected as obvious from two primary patents taken in combination alone or with one of four other patents. Claims 12-15 were rejected pursuant to 35 U.S.C. §103 as made obvious by the combination of the disclosures of U.S. Patent 6,157,648 to Voit and U.S. Patent 6,515,996 to Tonnby. Claims 16 and 17

were rejected as obvious from the disclosures of Voit '648 combined with Tonnby '996 and U.S. Patent 6,349,096 to Liu et al. Claims 18 and 19 have been rejected as obvious from Voit '648 taken in combination with Tonnby '996 and U.S. Patent 5,796,393 to MacNaughton. Claim 20 was rejected as obvious from Voit '648 and Tonnby '996 in further combination with U.S. Patent 5,956,391 to Melen et al. And, claim 21 has been rejected based on the disclosures of Voit '648 and Tonnby '996 combined with U.S. Patent 6,021,120 to Beyda et al.

Independent claim 22 has been rejected as obvious from Voit '648 and Tonnby '996 in view of U.S. Patent 6,424,818 to Hirono.

Initially, applicant notes claim 12 has been amended to positively recite the communications system has, "a subscriber switching system provided at a subscriber switching station for exchanging telephone calls." That is, the claimed subscriber switching system is **not** a conventional switching system as described by Voit '648. Similarly, claim 22 has been amended to positively recite a mobile switching system as part of the claimed communications system. Both the mobile switching system of claim 22 and the subscriber switching system of claim 12 are very different from the conventional switching system of Voit '648.

In the invention claimed by applicant, a subscriber line is connected with a LAN which is in turn associated with a subscriber switching system or subscriber switching exchange located at a subscriber switching station or local station and has at least one information providing server connected therewith. As previously explained, there is **no** telephone switching system between the subscriber line and the LAN. In the claimed configuration, the LAN and the subscriber line function as information transmission media for a community network. Each subscriber switching system or local station

covers a subscriber area of several miles. Thus, the server associated with each switching system can provide people of the corresponding community with information preferably related to the community independently of other switching system areas.

The purpose of the present invention is to provide a community network for people who live or work within a local station service area using subscriber lines and a LAN associated with a subscriber switching system or local station. This is achieved partly because the information transmitted from the information providing server only reaches those subscribers located in the corresponding subscriber switching system. If a subscriber is located outside the subscriber switching system where the information server is located, they cannot receive the local community information from the server for that subscriber switching system. Therefore, the invention easily provides selective transmission of community-oriented information to only those people who are living or working in the limited area served by the particular subscriber switching system.

In the case of the mobile system recited in claim 22, only users of the mobile switching station will receive the information from the server associated with that mobile switching station.

And, broadcast frames transmitted from the information server reach every subscriber device connected with the LAN. Accordingly, broadcast program services like TV or radio program services, which cover only a limited area, such as selected parts or all of a local station service area, is easily achieved as well.

An alternative to the invention is to create a community network using optical fibers distributed over a community or with fixed wireless communications devices located around a community. But, these options are very expensive. In contrast, the claimed invention provides a simple system for creating a community network using

conventional subscriber lines.

In particular, it is noted that each of independent claims 12 and 22 recite: a subscriber or mobile switching system at a subscriber or mobile switching station; a LAN associated with the switching system; branching means at the switching station for establishing a path for either telephone communications or data communications with the LAN; and an information providing server associated with the LAN. These components of the claimed communications system are simply not taught or suggested by the prior art cited, taken alone or in the several combinations noted above.

Voit '648, for example, seeks to achieve telephone communications using plural autonomous system type packet data networks, such as the Internet, with gateways and a directory server. Fig. 3 of Voit '648, noted in the rejection, only discloses the configuration of the Internet in which laptop computers 340, 342 connect via dial-up links 344, 346. Fig. 3 does not illustrate or suggest any switching system or switching exchange. In Voit '648, switching systems are used in their conventional manner, wherein the laptop computers are connected through the switching system to the autonomous system type packet data networks, such as Internet service providers (ISP's) using PPP or SLIP protocols.

The statement of the rejection further references Voit '648 as teaching a branching means 312, with a subscriber line 344 (the dial-up connection); a switching system 310 connected to a terminal 340 (laptop) of the branching means; an information providing server 324; a LAN 330 associated with the switching system, connected to another terminal of the branching means, for providing the subscriber device 340 with information through the subscriber line. Applicant submits that there are differences with what is taught in Voit '648, such that this correlation as set forth in

the statement of the rejection does not apply to amended claims 12 and 22.

Voit '648 fails to teach or suggest the point of the invention that a LAN is associated with a switching system of a subscriber or mobile switching station and having at least one information providing server connected with the LAN. In particular, the switching system 310 identified in the rejection is NOT a subscriber or mobile switching system as described and claimed by applicant. But, rather, the switching system of Voit '648 is an autonomous system comprised of multiple routers. And, in Voit '648, the information server 324 is not connected to a LAN connected to a subscriber device through a subscriber line and branching means.

Therefore, applicant submits that there are patentable differences between the invention as now recited in claims 12-22 and the disclosure of Voit '648.

The Tonnby '996 reference fails to overcome the deficiencies in the teachings of Voit '648. Tonnby '996 provides support for IP phone service using an IP-support modem 4. An IP phone call between users A and B is established though IP-support modem 4, subscriber line 5, PSTN/ISDN network 3, PSTN/ISDN connection 15, IP gateway 8, telephony server 10, a second instance of the PSTN/ISDN network 3, and subscriber line 7. Fig. 5 of Tonnby '996 illustrates a home LAN 61 to which PC 2 and IP support modem 4 are connected.

In Tonnby '996, the LAN 61 is located at the end user's location, not at a switching station, as now recited in independent claims 12 and 22. Further, the PSTN/ISDN network 3 is an aggregation of subscriber switching systems and toll switching systems, but is it not a single subscriber switching or mobile switching system. And, IP-net 9 of Fig. 1 in Tonnby '996 is an aggregation of IP networks, such as the Internet. Thus, the IP-net 9 is not the same or equivalent to the single LAN recited in

the claims.

In the statement of the rejection, Tonnby '996 is referenced as teaching an IP gateway (Fig. 1) corresponding to a branching means, a LAN which supports communication using IP protocol (second terminal) from an IP-based network, and is further associated with PSTN/ISDN network 3 (switching system (second terminal)), based on Fig. 3 and col. 2, line 65. But, again, the network 3 is an aggregation of many different systems, including both subscriber switching systems and toll switching systems. Further, the LAN 61 is a home LAN, located at the user site, not at one of the switching stations as claimed. Thus, in Tonnby '996, the LAN is not associated with a single subscriber switching system.

Tonnby '996 is also believed to be distinguished from the invention as claimed, such that claims 12-22 are patentable over Tonnby '996, alone or in combination with the teachings of Voit '648, to the extent they may be logically combined without use of hindsight knowledge of applicant's invention.

It is noted that neither Voit '648 nor Tonnby '996 teaches or suggests the claimed combination of a LAN located at a single subscriber or mobile switching station - each teaches placing a LAN in a different location and neither suggests the connection claimed by applicant. Further, neither teaches or suggests the same network configuration as claimed by applicant. One teaches an aggregation of systems while the other teaches a different type of system altogether. It is questionable that these references can be logically combined without hindsight knowledge of the invention, since they are used with different systems to produce different networks. But, even in combination, they still fail to teach the same communications system as claimed by applicant.

With respect to the Hirono '818 patent, applicant respectfully submits there are significant differences with this reference as well. Hirono '818 relates a communication controller located at a mobile object, such as a train for relaying communications among mobile stations, like mobile phones and a base station. Hirono '818, however, only teaches a mobile switching station and lacks any other similarity to the claimed invention.

The remaining references cited in combination with the primary Voit '648 and Tonnby '996 patents are believed to be even more distinguishable from the invention and cannot overcome the deficiencies of the primary references to make the invention as now claimed obvious.

In view of the differences between the invention now claimed and the primary references, Voit '648 and Tonnby '996, and as well, with Hirono '818, applicant respectfully submits that the claimed invention is patentably different and allowable over the cited art of record.

Accordingly, the application and claims are believed to be in condition for allowance, and favorable action is respectfully requested. No new matter has been added.
